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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,149	10/30/2000	Dominic Wai-Kwing Yeung	APV 30271CIP	6595

7590 02/11/2003  
STEVENS, DAVIS, MILLER & MOSHER, L.L.P.  
1615 L Street N.W., Suite 850  
Washington, DC 20036

69  
EXAMINER

ASINOVSKY, OLGA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-19

# Office Action Summary

Application No.  
09/698,149

Applicant(s)  
Yeung et al

Examiner  
Olga Asinovsky

Art Unit  
1711



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on RCE of 11/22/02
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above, claim(s) 20, 21, and 25-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 18 6) ☐ Other:

Art Unit: 1711

## DETAILED ACTION

### 1. *Continued Examination Under 37 CFR 1.114*

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/22/02 has been entered.

The amendment filed on 10/28/02 after final rejection is entered. The amendment does not introduce new matter. Support of this amendment is found in the present specification at page 8.

There were a restriction and election of the species in the parent case. A request for continued examination under 37 CFR 1.114 based on the parent application does not request to change the restriction requirement.

Applicants elected Group I with traverse in Paper No. 6. As discussed in the office action mailed on 10/23/01, paper No. 7, claims 20-21 and 25-47 are withdrawn from further consideration for being drawn to a nonelected invention and/or species.

The present claims are 1-19 and 22-24.

Art Unit: 1711

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 and 22-24 rejected under 35 U.S.C. 103(a) as being unpatentable over McCall U.S. Patent 5,277,899 or Li et al U.S. Patent 5,580,819 each in view of AU 199915321.

Reference McCall and Li have been discussed in the office action mailed on 10/23/01, paper No. 7. All discussions are equivalently set here.

Applicants amend each independent claims 1, 11 and 12 by introducing specified molecular weight for a block polymer suds stabilizer.

McCall discloses a composition comprising a terpolymer comprising three polymers (referring to as the monomers from which they can be derived), column 12, lines 22-30. The cationic monomers such as dimethylaminoethyl (meth)acrylate (DMAM) is the applicants' claimed cationic monomer unit A, column 12, lines 58-59, for the present claim 1. The anionic monomers such as hydroxyethyl (meth)acrylate (HEA or HEMA) and unsaturated (meth)acrylic acid monomeric units are readable on the claimed monomeric units B and C in the present claims 12 and 23. McCall discloses that the preferred B monomers include a mixture of an acrylic acid and

Art Unit: 1711

dimethylaminoethyl methacrylate, column 17, lines 5-8. Any combinations of monomeric units with or without additional hydrophobic and/or hydrophilic monomer units having low or high polarity, which can provide hair setting benefits, are acceptable for the formulation of a hair setting composition in McCall's invention, column 12, lines 7-21. The cationic monomer such as a dimethylaminoethyl (meth)acrylate can be present in the amount of up to about 98% of the total monomers in the copolymer, column 16, line 35. The claimed block copolymer is readable in McCall's invention for the present claims 11 and 12.

Li discloses a coating composition including an organic polymer, claim 12 at column 24. An organic polymer includes hydroxyalkyl (meth)acrylate, (meth)acrylic acid and amino alkyl methacrylates, column 2 line 60 through column 3, line 4. The monomer unit of 2-(dimethylamino)ethyl methacrylate is the applicants' claimed unit A, for the present claims 1, 11 and 12. The monomer unit of 2-hydroxyethyl acrylate is the applicants' claimed unit B. The monomer unit of (meth)acrylic acid is applicants' claimed unit C, column 12, example 1. Li discloses a process for producing an organic polymer wherein the components are charged into the reactor vessel in a continuous manner, column 13, lines 15-18. Therefore, the recited monomers are polymerized for producing a specified block polymer. The obtained film forming polymer has a number average molecular weight of between about 500 and about 1,000,000, preferably between about 1,000 and about 100,000, column 5, lines 34-36, for the present amended claims 1, 2 3 and 8.

Art Unit: 1711

None of the primary references discloses a block polymer sud stabilizer having an average cationic charge density of about 5 or less units per 100 daltons molecular weight, nor a block polymer suds stabilized in the preamble in the present claims. Also, McCall does not disclose an average molecular weight of a block polymer.

Reference to AU 199915321 discloses a polymeric sud stabilized which is a polymer based on the same monomeric unit of the formula in claim 4, page 55, for the present claim 1. A polymeric sud stabilized has an average molecular weight of from 1,000 to 2,000,000 daltons, claim 3 at page 55, and a cationic charge from 0.0005 to 0.05 units per 100 daltons molecular weight, claim 1 at page 55.

In light of the teaching in AU 199915321 that a polymer having the monomeric unit which is dialkylaminoalkyl (meth)acrylate and which is named as a sud stabilizer, it would have been obvious to one having ordinary skill in the art to consider that the formed block polymer in McCall and Lai having the same chemical structure can be named as a sud stabilizer. It would have been obvious to one of ordinary skill in the art to consider that an average molecular weight of a block polymer and a cationic charge from 0.0005 to 0.05 units per 100 daltons molecular weight as teaching in AU 199915321 could be obtained for a block polymer in McCall and Lai, because all references disclose the analogous chemical formulation of a said block polymer, and since the present claim 1 discloses an average cationic charge density of about 5 or less per 100 daltons molecular weight. The term "less" is within the scope from 0.0005 to 0.05 in AU 199915321.

Art Unit: 1711

A molecular weight of a block polymer and an average cationic charge density rendered prima facie obvious in view of the identical block polymer units formulation in McCall or Lai in view of AU 199915321.

The new search has been made in light of the amendment including the recitation of a Mw of the block polymer in each independent claims 1, 11 & 12. O, A

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is relevant to show the state of the art knowledge. The new IDS filed on has been considered. The closest reference is AU 199915321 A1, which has been discussed above.

3. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 and 8 stand in wrong dependency.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is (703) 308-0041. The examiner can normally be reached on Monday to Friday from 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718 and (703)872-9311 after final.

Application/Control Number: 09/698,149

Page 7

Art Unit: 1711

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

O.A.

O.A.

February 9, 2003



**James J. Seidleck**  
**Supervisory Patent Examiner**  
**Technology Center 1700**